Command College Class-40

"How Technology Can Reduce Crime and Impact the Criminal Justice System."

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This Command College Independent Study Project is a FUTURES study of a particular emerging issue in law enforcement. Its purpose is NOT to predict the future, but rather to project a number of possible scenarios for strategic planning consideration.

Defining the future differs from analyzing the past because the future has not yet happened. In this project, useful alternatives have been formulated systematically so that the planner can respond to a range of possible future environments.

Managing the future means influencing the future--creating it, constraining it, adapting to it. A futures study points the way.

The views and conclusions expressed in the Command College project are those of the author and are not necessarily those of the Commission on Peace Officer Standards and Training (POST).

"How Technology Can Reduce Crime and Impact the Criminal Justice System."

The ever increasing publicity surrounding parolees, probationers and sex offenders committing crimes while not incarcerated in a government facility has generated intense public scrutiny. Communities throughout the United States continue to be alarmed by sexual assaults, violent crimes and murders being committed by individuals who have previously come in contact with the Criminal Justice System. Over the years, government agencies have sought ways to combat parolees, probationers and sex offenders from re-offending. The recidivism rate for parolees incarcerated in California Department of Corrections facilities in 2004 was 70%[1]. In California alone, there are more than 63,000 persons required to register as sex offenders[2]. Our Criminal Justice System is in a state of crisis.

The Criminal Justice System continues to be overwhelmed and prisons continue to be built because of overcrowding. Our society is questioning what additional resources are available to help ease the affliction of crime. With technology growing in leaps and bounds every day, could it be possible to use technology to limit some of the violent offenses from occurring? Based on developments related to Global Positioning Systems, would it be possible to develop an implant that could track, in real time, all parolees, probationers and sex registrants? The development of GPS technologies to implant and track parolees and sex offenders, in real time, is perhaps the best way to protect the innocent from harm by these felons.

Historical Perspective

The Global Positioning System, more commonly called GPS, is a constellation of more than two dozen GPS satellites. These are used both by the military and civilian authorities. Anyone else wishing to purchase a receiver has this capability as well. GPS satellites broadcast precise timing signals by radio to GPS receivers, allowing them to accurately determine the GPS receiver location (longitude, latitude and altitude) in any weather, day or night, anywhere on earth. This is done by triangulation in which a user's GPS receiver gets signals from at least three satellites. The information derived by the satellite signals allows the receiver to pinpoint its position and the time and the velocity of movement.

The United States Department of Defense developed the GPS system after an inspiration for it came during the launch of the first Russian Sputnik in 1957. A team of U.S. scientists, led by Dr. Richard B. Kershner, was monitoring the Sputnik's radio transmissions and discovered that because of the Doppler Effect,

[1] http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/index.html

[2] California Office of Attorney General Megan's Law http://www.meganslaw.ca.gov/

the signals being transmitted by Sputnik were higher as the satellite approached and lower as it continued away. The first experimental Block-1 GPS satellite was launched by the United States in February 1978[3].

As technology continues to develop, the accuracy of information is increased. In August 2000 the accuracy of GPS signals was within 2 meters. Today, accuracy is improved to about 1 centimeter over short distances for those wishing to have receivers with that particular level of accuracy. The surge in GPS use coincides with the technology's dramatic advancements. Handheld GPS devices have become smaller and more accurate. The current devices in use to track persons under "house arrest," for instance, often pinpoint a person's position within 30 feet. They are more precise than older devices that use radio frequencies and detect only when the wearer leaves a certain area, such as home if under "house arrest."

The use of GPS technology to track equipment and individuals has been in partial use since the 1980's by the United States Military[4]. The system has been fully operational since 1994. Governments have used GPS tracking technology not only for military purposes, but also in the law enforcement arena. Hundreds of law enforcement agencies currently use electronic monitoring bracelets to monitor probationers. In Marin County, California this system is not used for live tracking of individuals. The signal is activated by a hard line telephone system when a probationer occupies a residence. When the probationer leaves the residence, the signal is no longer activated. The monitoring system is used to alert the Probation Department that an individual has left the residence. Upon having an alarm activation, a probation officer is notified the day after the violation of the offender's movements. This system has little impact, though, on the effectiveness and efficiency of local law enforcement. Emerging technologies, however, may allow officials to implant a suitable GPS monitor. This would allow for easier and more accurate "live tracking" of dangerous individuals until they are incarcerated.

GPS Implants

Micro implant chips have been used for years in animals, and have begun to be used on an experimental basis throughout the world on humans[5]. In Britain, Professor of Cybernetics Kevin Warwick implanted a chip in his own arm[6]. He did this to demonstrate how computers and humans might be able to communicate in the future. With the chip implanted in his arm, Warwick is effectively wired up to the computers in his building. When Professor Warwick

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[3] NAVSTAR Global Positioning System Joint Program Office http://gps.losangeles.af.mil/jpo

[4] Wikipedia http://en.wikipedia.org/wiki/GPS

[5] http://en.wikipedia.org/wiki/Microchip_implant_%28animal%29

[6] http://www.pcworld.com

walks throughout the building, computers automatically pull up preprogrammed Web pages such as his favorite sites, and which doors are open. The computers say "Hello, Professor Warwick," or tell him how many e-mail messages he has. In 2004, the Mexican Attorney General's Office implanted 18 of its staff members with the human chip to control access to secure data rooms[7].

In October 2004, a microchip that can be implanted under the skin to give doctors instant access to a patient's records received government approval[8]. This advancement in diagnostic technologies could transform medical care. The tiny electronic capsule is the first such device to receive Food and Drug Administration approval. It transmits a unique code to a scanner which allows doctors to confirm a patient's identity and obtain detailed medical information from an accompanying database[9].

Doctors could scan patients like items at a grocery store. Instead of the price of the item, the patient's medical record would be displayed on a computer screen. Emergency room doctors could scan unconscious car accident victims to check blood type, medications and whether the patient has any allergies. Surgeons could scan patients in the operating room to guard against cutting into the wrong person. The microchips could be implanted in Alzheimer's patients in case they get lost. With the current technology of GPS and the ability to scan detailed medical information, combined technologies could save many lives.

If an implant is used to facilitate GPS tracking it could possibly limit the temptation and ease of tampering with the tracking system. An ankle bracelet is easily removed whereas an implant would necessitate cutting in to one's skin. Implants are much smaller and less obtrusive than the bulky ankle bracelets. Combining the functions of the two technologies noted could result in a program that would benefit the Criminal Justice System and many others if used appropriately. Open your minds and begin thinking of the benefits of both technologies to track, apprehend and rehabilitate criminal offenders instead of merely dumping them back into the environs of our already-overcrowded prison system.

California's Prison System

California's prison problems are tied directly to recidivism and overcrowding. When parolees commit crimes, they not only burden the state's overtaxed prison system, they create new victims and compromise public safety. California's recidivism rate is, at 70 percent, the nation's highest. California has only authorized and built one prison over the past 10 years. Today more than 16,000 prisoners are housed in gymnasiums, day-rooms and other unsafe and overcrowded spaces. The California Department of Corrections and

[7] http://www.pcworld.com
[8] http://news.com 1/21/2005
[9] http://news.com 1/21/2005

Rehabilitation (CDCR) reported that it cannot house inmates after June 2007 unless the state takes immediate action to correct the overcrowding problem[10].

There are 135 jail facilities in the state's 58 counties with a rated capacity of 84,269 beds. 58 county probation agencies supervise 384,852 adult probationers. Parole Agents, Probation Officers, courts and other law enforcement agencies are overtaxed with the supervision of parolees, probationers and registered sex offenders[11].

On December 31, 2005, the California Department of Corrections and Rehabilitation adult institution population was 168,035. This is 4,096 (2.5 percent) higher than the December 31, 2004 population of 163,939. This is a result of not only increases in new admissions from California courts, but also parole violators returning with new terms and cases as well as parole violators returning to custody for parole violations. There were 50,796 new admissions from court during 2005, an increase of 1,867 (3.8 percent) over the previous year. There were 19,777 parole violators with new terms during 2005, an increase of 1,910 (10.7 percent) compared to 2004. There were 61,999 parole violators returned to custody during 2005, an increase of 2,365 (4.0 percent) compared to 2004[12].

On December 31, 2005, the CDCR felon parole population in California was 111,658. The projected felon parole population in the year 2011 is 193,195. The number of parole agents has not kept pace with caseload growth, and few resources are available to assist in the successful reentry of parolees. Eighty percent of all parolees are supervised on regular (rather than intensive) caseloads. These parolees usually have fewer than two 15-minute face-to-face contacts with the parole officers each month. Parole supervision costs about $2,200 per parolee per year, compared to $22,000 per prisoner per year. Budget constraints simply do not permit much monitoring. The CDCR previously acknowledged that it has lost track of about one-fifth of the 127,000 parolees it was supervising in 1999. Nationally, about 9 percent of all parolees have absconded supervision[13].

By implanting all parolees, probationers and registered sex offenders, California county jails and state prisons could limit the number of incarcerated beds needed and at the same time could more effectively and efficiently supervise parolees, probationers and registered sex offenders. High risk sex offenders would be virtually unable to abscond from law enforcement. A computerized memory tracking system could check a crime scene location to see if a probationer or parolee was present during the crime. Closures of criminal offenses would

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[10] http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/index.html

[11] http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/index.html

[12] http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/index.html

[13] Corrections Statistics for California http://nicic.org/statecorrectionstatistics/ca.htm

increase significantly, and the safety of the public would be better served by using this technology to its fullest extent. Some have already recognized the potential of GPS; others may learn from a glimpse into the future.

Future Potential of Implanting all Parolees, Probationers and Registered Sex Offenders with Micro Global Positioning Chips

Momentum has taken place in several states to move towards placing external GPS tracking devices on parolees, probationers and sex registrants. In Florida, for instance, the State legislature implemented an intensive program for the registration and monitoring of sex offenders beginning in September 2005. The "Jessica Lunsford Act" identifies new standards for frequency and duration of sex offender registration, increased penalties for identified sex offenses and establishes a program within the Department of Corrections to identify, assess and monitor high-risk sex offenders on community supervision.

The law imposes mandatory electronic monitoring on child sexual predators convicted of offenses committed after September 1, 2005. The Act also creates a new felony offense of tampering with electronic monitoring equipment. The law authorizes lifetime electronic monitoring as a condition of probation[14]. Expenditures authorized in the Act include $4 million for 1,200 new GPS units in Florida. In the House of Representatives Staff Analysis of the bill, the Division of Corrections projections include a fiscal impact of $2.5 million in FY2005-06 for 328 offenders, $7 million in FY 2006-07 for 911 offenders and $13 million in FY 2007-08 for 1,783 offenders[15].

During the Maryland 2004 General Assembly session, House Bill 1242 and Senate Bill 783, both of which established a Task Force to Study Criminal Offender Monitoring by Global Positioning Systems, were passed and signed into law by Governor Robert L. Ehrlich, Jr. The law went into effect on July 1, 2004[16].

The purpose of the Task Force is threefold: 1) To study how the State can utilize global positioning technology to monitor individuals who have committed criminal offenses; 2) To determine how law enforcement can benefit from the linkage to global positioning technology to solve crimes and streamline workload; and 3) To review the admissibility of evidence issues. Subsequently, the State of Maryland has implemented a pilot program utilizing GPS to track sex offenders, parolees and probationers. Additionally, Maryland will monitor the effects to the Criminal Justice System as a result of the pilot program.

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[14] USA Today 6/6/2006

[15] http://www.myfloridahouse.gov (House of Representative Staff Analysis HB1877)

[16] State of Maryland Task Force Study http://www.dpscs.state.md.us/

In 2006, California State Senator Jackie Speier sponsored a proposed law requiring paroled "sexual predators" to be tracked by satellite. Former California State Senator Speier believes GPS can save lives and millions of dollars every year by deterring new criminal behavior by sexual predators wearing monitored tracking devices (15). It recently received its first hearing in the State Legislature. If the proposed Senate Bill 1178[17], makes it out of the State Senate and is endorsed by Governor Arnold Schwarzenegger, high-risk sex offenders identified as likely to re-offend again would be tracked by Global Positioning Satellites while on parole or probation. (note- at this time there is no proposal for microchip implants by any government official. Only external GPS systems have been suggested). On February 23, 2007, Governor Schwarzenegger announced $5 million in local grants to monitor sex offenders. Six Sheriff's Departments were recipients of the funds based on regional needs to support their efforts to monitor, investigate, apprehend and prosecute habitual sex offenders in California[18].

Currently, states that use GPS tracking are spending $5 to $10 daily to track each sex offender. Some require offenders, unless indigent, to pay the cost[19]. The government agencies that use GPS tracking can choose the more expensive "active" tracking, which gives real-time reports, or "passive" monitoring, which sends one report daily that lists where the offender went that day.

In California, certain offenders deemed by the State to be a "sexually violent predator" recently released from prison are monitored by private companies. Last year in Marin County, a sexually violent predator was released into that jurisdiction by the California Department of Corrections and Rehabilitation. Liberty Healthcare Corporation, a private organization, was contracted to monitor the sex offender and his GPS ankle bracelet. Soon after his release, the offender was returned to custody by the Sheriff's Department after violating the terms of his release. This is only one example where an underage teen was protected from a predator, but serves as a possible blueprint for others wishing to see similar results.

If California is as successful as Florida in cutting sex crime recidivism, it could possibly save millions annually in law enforcement and prison expenses. Current GPS bracelets, or the use of implants to accomplish the same goals, can save lives as well as money. The purpose of tracking all parolees, probationers and sex registrants, however, should not be based on financial savings alone. In the end, its use and application will be a balance of its benefits versus the intrusion into the lives of those selected for monitoring by the government.

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[17] http://leginfo.ca.gov/pub/05-06/bill/sen/sb_1151-1200/sb_1178_bill_20060920_history.html

[18] CALCASA Public Policy http://www.calcasapublicpolicy.org

[19] USA Today 06/06/2006

Objections to GPS

Not everyone agrees with implementing GPS and microchip technology to track all parolees, probationers and sex registrants. The Electronic Privacy Information Center, known as EPIC is a public interest research center in Washington, D.C. It was established in 1994 to focus public attention on emerging civil liberties issues and to protect privacy, the First Amendment and constitutional values[20]. While corporate giants tout the merits of Radio Frequency Identification (RFID) technology, civil liberties advocates, such as EPIC, point out that the ability to track people, products, vehicles and even currency would create an Orwellian world where law enforcement officials and nosy retailers could read the contents of a handbag, perhaps without a person's knowledge, simply by installing RFID readers nearby.

Currently, some RFID readers have the capacity to read data transmitted by many different RFID tags. If a person enters a store carrying several RFID tags, for example, one RFID reader can read the data emitted by all of the tags. This capacity enables retailers with RFID readers to compile a more complete profile of shoppers than would be possible by simply scanning the bar codes of products a consumer purchases. Schools could have similar systems in place that could alert educators if a chipped sex registrant entered a school campus. Concerns arise when RFID is used for commerce, and not merely for safety. Where to stop, critics might ask? If a sex registrant enters a school campus an alarm could be activated. Technology could even be in place to automatically lock classroom doors. Would we want covert alerts to our buying preferences available to merchants as we enter their premises? The technology is here; the costs of systems versus their possible uses are issues still unresolved. The potential for public good, though, remains strong.

A Possible Future

There is a significant amount of study on the effectiveness of tracking parolees, probationers and sex registrants. Law enforcement, legislatures and private vendors have begun to work independently and collectively to use technology to enhance law enforcement abilities and ease the Criminal Justice System's overload. Governmental agencies could contract with private organizations to enhance the monitoring of parolees, probationers and sex registrants. This could result in more parolees and probationers which could ease the impact on the prisons and jails, but would increase the workload for Parole and Probation Officers. Additionally, this could enhance the crime fighting capabilities to increase the crime solving impact.

[20] http://www.epic.org

If implanting all probationers, parolees and sex registrants with micro global positioning chips is successful, it could lead to so many other avenues of use. How can society benefit from technology without moving down a path of "Big Brother?" Will the public outcry over an Orwellian society, privacy issues and concerns by other unknown organizations dilute or limit the technological abilities available to law enforcement and the criminal justice system? What kind of concerns will governmental protection agencies such as the ACLU have? Will children's groups such as the Polly Klaas Foundation or an Alzheimer's patient organization strive to put forth legislation to make this a reality?

In September 2006, the Florida Department of Law Enforcement was honored by the International Association of Law Enforcement Planners for the "Project of the Year." This was as a result of the implementation of the work completed by the "Jessica Lunsford Act Implementation Team." Florida Department of Law Enforcement Commissioner Gerald Bailey stated that he was proud of the team's success and that it is considered a national model[21].

Summary

Envision a future where this model is a reality. Law enforcement would have the ability to actively track all parolees, probationers and sex registrants, in real time, from their patrol vehicles. Think of the crime fighting capabilities this would provide; the lower recidivism rates and fewer prison beds needed as a result. Could more criminals be placed in outreach programs and still be controlled by house arrest capabilities?

Because of implants, a parolee, probationer or sex registrant could still re-enter society without being labeled publicly. Probation Officers and Parole Agents could ensure a probationer or parolee is at their job site by clicking on an icon from their desktop. Visualize the positive impact on society and the Criminal Justice System by implanting the few who have broken society's laws. And then think about what you might do when it happens.

[21] http://www.fdle.state.fl.us/annualreport/06-07/annualrpthighlight_info.pdf